Challenges in Implementing New CNS/ATM Technology

Panel on New Air Traffic Control & Management Technology
for the
Regional Airport Planning Committee

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February 23, 2007

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Implementation of New CNS/ATM Technology Requires Integration

- Ground Infrastructure
  - Navigation/Landing Guidance
  - Communication
  - Surveillance
  - ATM Tools
- Airplane Avionics
  - Navigation/Landing Guidance
  - Communication
  - Surveillance
- Operational Procedures

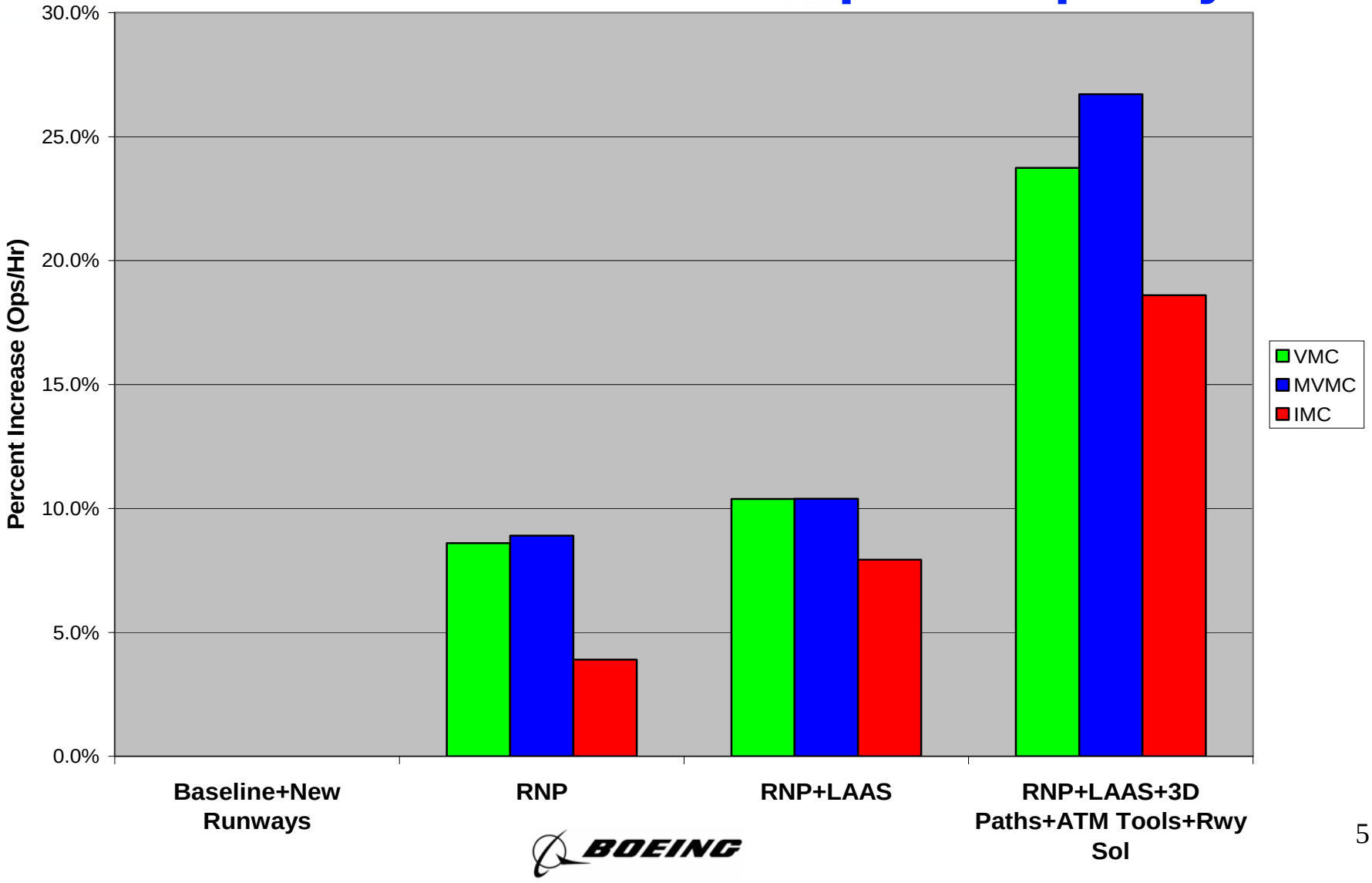
Operational Change is the Basis of Defining Costs and Benefits

- Understand the future operation
  - What will the new procedure look like?
  - How will the new CNS/ATM technology be used?
    - What role will the air traffic controller play?
    - What ground infrastructure is needed?
    - What role will the pilot play?
    - What avionics is needed in the airplane?
- Develop the performance requirements for the avionics and the ground infrastructure

Process for Deriving Costs and Benefits

- Infrastructure replacement determines costs
  - Airplane Changes
  - New Infrastructure
- Future operational change is the key to benefits
  - What will the new procedure look like?
  - What role will the air traffic controller play?
  - What role will the pilot play?
  - How will the new CNS/ATM technology be used?
- What are the capacity and efficiency benefits?
- What tools can we use to evaluate the benefits?

New CNS/ATM Technology Has the Potential to Increase Airport Capacity



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Issues

- Do the benefits outweigh the costs?
- Will new separation standards be required?
- When will airlines equip?
- When will FAA implement new ground infrastructure and procedures?

Recommendations

- Working Together
  - New CNS/ATM technology solutions will be site specific
  - Airports and airlines need to be proactive
  - Airports and airlines need to work with the FAA to get new advanced procedures and new CNS/ATM technology implemented at their airport